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MCDERMOTT WILL & EMERY LLP				EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/529,920	Applicant(s) FREEBAIRN ET AL.
	Examiner John M. MacLwinen	Art Unit 2442

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 June 2009.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14,17,18,28,29,33-35 and 37-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-14,17,18,28,29,33-35 and 37-49 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 6/02/2009 have been fully considered but they are not persuasive.
2. Applicant begins by arguing that "Cloonan, Odfelt or Siemens fail to disclose features of the amended claims 1, 48 and 49. For example, none of them disclose "control means ... configured to establish logical links through the node and across a plurality of nodes ... wherein each said logical link is selectively switchable into circuit-switched services or packet-switched services at each node, into one of the plurality of packet processing pipelines." Applicant's arguments are not persuasive as the above quotation and argument does not correspond to any of Applicant's pending claim language, particularly the language "selectively switchable into circuit-switched services or packet-switched services at each node, into one of the plurality of packet processing pipelines".
3. Applicant continues by arguing that Cloonan does not disclose the above quotation, arguing that "The objects of Cloonan are very different from the objects of the present invention." Applicant's arguments, addressed to what Applicant interprets to be Cloonan's objectives, are not persuasive as the arguments do not correspond to claimed limitations; additionally, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patently distinguishes them from the references.

4. Applicant next argues that "It would not have been obvious to a person skilled in the art" to utilize Cloonan in view of Siemens and Odfelt. Applicant's allegations, which fail to address the motivation statements provided by the Examiner in the prior Office Actions, are not persuasive.

5. Applicant continues by arguing that "Odfelt's invention is 'directed to techniques for supporting multi-link protocols'" and that "The objects of Odfelt are also very different from the objects of the present invention...". Applicant's arguments, addressed to what Applicant interprets to be Odfelt's objectives, are not persuasive as the arguments do not correspond to claimed limitations; additionally, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

6. Applicant next argues that, regarding Siemens, "It would not have been obvious to use these switches to form networks because they are used to interconnect networks not form networks of their own." Applicant's unsupported allegation is unpersuasive and is not directed to limitations required by the pending claim language.

7. Applicant continues by arguing that "The present invention seeks to provide an improved communications node and methods of operations thereof". Applicant's statement, directed to Applicant's goals and unrelated to claim limitations, are not persuasive.

8. Applicant argues that, regarding Siemens "Nor it is an object of Siemen's to create a multiservice switching node capable of forming multiservice networks of the

kind already described in any of the pending claims." Applicant's argument, directed to what Applicant's perceive to be Siemens objective, is unpersuasive; In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Response to Amendment

9. Applicant's currently pending claim 38's status is indicated as "Previously Presented"; said status is correct. However, the text of claim 38 retains the underlining and strikethrough added when Applicant amended said claim on 8/4/2008. Applicant is encouraged to review their use of such formatting to ensure that it is used correctly when submitting subsequent amendments. Future failure to comply with MPEP 1.121 will result in a Notice of Non-Compliance.

Claim Rejections - 35 USC § 112

10. Claims 1, 48 and 49 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Said claims recite "selectively switchable into circuit-switched services or switched services". It is unclear what the difference is between "circuit-switched services" and "switched services". In order to perform a complete examination, said claims have been interpreted broadly.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1 -13, 17, 28 - 29, 33 - 35, 37 - 38, 40 - 42, and 48 - 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cloonan (5,537,403) in view of Siemens (UMTS: Opening Up a World of Opportunities) and Odfelt (US 7,315,900 B1).

13. Regarding claim 1, Cloonan shows a communications node for establishing a plurality of logical links running through the node contemporaneously to one or more remote nodes, the communications node comprising

input switch means;

output switch means;

a plurality of communications resources connected between said input and output switch means, said plurality of communications resources including at least first and second communications resources adapted to deliver different communication services including packet-switched services and circuit-switched services (col. 5 lines 9 - 23) said packet-switched services delivered by a plurality of packet processing pipelines (col. 6 lines 28 - 60)

control means associated with said input switch means and said output switch

means configured to establish logical links through the node (col. 6 lines 48 - 59) and across a plurality of nodes, and if configured to cause the set up of a logical by issuing a request to establish a logical link routed from a source to a destination node and to cause the setting of appropriate switching tables of nodes having the required resources but not of nodes denying the request (col. 6 lines 55 – 60 and col. 7 lines 22 -26, where said 'required resources' are represented by Cloonan's teaching of utilizing only available, non-blocked paths) and wherein each said logical link is selectively switchable into circuit-switched services or switched services at each node (col. 6 line 48 – col. 7 line 45).

Cloonan does not explicitly show where each of said packet processing pipelines processes packets according to one or more packet processing protocols, nor does Cloonan explicitly show where said logical link comprises one or more channels of a physical link.

Siemens shows where each of said packet processing pipelines processes packets according to one or more packet processing protocols (pg. 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Cloonan with that of Siemens in order to further Cloonan's goal of flexible evolution (Cloonan, Abstract) by supporting additional protocols.

Cloonan in view of Siemens do not explicitly show where said logical link comprises one or more channels of a physical link.

Odfelt shows where said logical link comprises one or more channels of a physical link (col. 5 lines 20 – 30, col. 13 lines 60 – 68).

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Cloonan and Siemens with that of Odfelt in order to optimally utilize the physical links exiting in Cloonan's disclosure.

Regarding claim 2, Cloonan in view of Siemens and Odfelt further show wherein said communications resources include signal processing means (Cloonan, col. 15 lines 48 - 62).

15. Regarding claim 3, Cloonan in view of Siemens and Odfelt further show wherein said communications resources include packet processing means (Cloonan, Abstract).

16. Regarding claim 4, Cloonan in view of Siemens and Odfelt further show wherein said communications resources include a first plurality of communications resources adapted to serve one of said service types and a second plurality of communications resources adapted to another of said service types (Cloonan, Abstract, col. 5 lines 1 - 16, col. 22 lines 8 - 58, Fig. 17).

17. Regarding claim 5, Cloonan in view of Siemens and Odfelt further show wherein the at least first communications resource is arranged to process a component of a synchronous input signal, and the at least second of said communications resources is arranged to process a component of an asynchronous input signal (Cloonan, col. 22 lines 8 - 58).

18. Regarding claim 6, Cloonan in view of Siemens and Odfelt further show wherein a plurality of packets from a signal flow is processed by said communications resources (Cloonan, col. 6 lines 1 - 47).
19. Regarding claim 7, Cloonan in view of Siemens and Odfelt further show wherein said input switch means is arranged to receive at least one input signal partitioned such that it comprises a plurality of signal components, wherein said plurality of logically distinct links through the node are established by means of logically associated ones of signal components (Cloonan, col. 6 lines 1 - 60, Fig. 5).
20. Regarding claim 8, Cloonan in view of Siemens and Odfelt further show wherein said output switch means is configurable to receive signal components and switch signal components onto at least one output signal which partitions said signal components, wherein said logical links through the node are extended by means of logically associated ones of the components and of the output signal (Cloonan, Figs. 5, 10 - 11, col. 3 lines 1 - 37, col. 6 lines 28 - 48).
21. Regarding claim 9, Cloonan in view of Siemens and Odfelt further show wherein said signal components are partitioned by means of one or more of: time division multiplexing, frequency division multiplexing, code division multiplexing and space division multiplexing (Siemens, pg. 10).
22. Regarding claim 10, Cloonan in view of Siemens and Odfelt further show wherein said input switch means is configurable to switch a plurality of partitioned input signals contemporaneously (Cloonan, Fig. 5, col. 6 lines 28 - 68).

23. Regarding claim 11, Cloonan in view of Siemens and Odfelt further show wherein said output switch means is configurable to switch a plurality of partitioned output signals contemporaneously (Cloonan, col. 6 lines 28 – 68, col. 7 lines 5 – 38).
24. Regarding claim 12, Cloonan in view of Siemens and Odfelt further show wherein one or more of said logical links spans more than two nodes such that it establishes a logical network (Odfelt, Abstract, Fig. 1).
25. Regarding claim 13, Cloonan in view of Siemens and Odfelt further show wherein one or more of said logical networks is initiated and/or terminated at a node (Odfelt, Abstract, Fig. 1).
26. Regarding claim 17, Cloonan in view of Siemens and Odfelt further show wherein said input switch means and said output switch means are configurable to circuit switch communications data on a logical link such that low latency transfer of said data is achieved (Cloonan, col. 6 lines 8 - 60).
27. Regarding claim 28, Cloonan in view of Siemens and Odfelt further show wherein a plurality of synchronous input signals are received at an input means and an output signal from an output means comprises components from different ones of the input signals (Abstract, Fig. 5).
28. Regarding claim 29, Cloonan in view of Siemens and Odfelt further show wherein the output switch means supplies a plurality of output signals to an output means, and wherein first and second output signals of the plurality of output signals comprise components from one input signal (Cloonan, Fig. 5, Odfelt, col. 5 lines 20 - 30, col. 13 lines 60 - 68).

29. Regarding claim 33, Cloonan in view of Siemens and Odfelt further show wherein said output switch means is arranged to switch a packet supplied from the packet processing means in accordance with destination information associated with the packet by the packet processing means (Cloonan, Abstract, col. 1 lines 45 – 55).
30. Regarding claim 34, Cloonan in view of Siemens and Odfelt further show wherein a packet from an input signal is switched such that it appears as a packet in a plurality of output signals of an output means (Cloonan, Figs. 3 and 5, Odfelt, Fig. 13, col. 5 lines 20 - 62).
31. Regarding claim 35, Cloonan in view of Siemens and Odfelt further show wherein a plurality of packet flows each on a different logical link of an input signal are switched such that they appear as packet flows on different output signals (Cloonan, Figs. 3 and 5, Odfelt, Fig. 13, col. 5 lines 20 - 62).
32. Regarding claim 37, Cloonan in view of Siemens and Odfelt further show wherein a plurality of packet flows on a logical link of an input signal are switched such that they appear as packet flows on logical links of different output signals of an output means (Cloonan, Figs. 3 and 5, Odfelt, Fig. 13, col. 5 lines 20 - 62).
33. Regarding claim 38, Cloonan in view of Siemens and Odfelt further show wherein an input signal comprises packets belonging to a plurality of packet flows each packet flow being carried on a different logical link, wherein said input switch means is operable to demultiplex the input signal to provide individual packet flows and supply a combined packet flow therefrom to an appropriate packet processing pipeline for processing in

accordance with a predetermined packet processing protocol (Cloonan, Figs. 3 and 5, Odfelt, Fig. 13, col. 5 lines 20 - 62).

34. Regarding claim 40, Cloonan in view of Siemens and Odfelt further show wherein said at least one input signal comprises a first input signal which is timed synchronously with a timing reference signal of the node and a second input signal having a rate of receipt independent of said timing reference signal of the node (Fig. 17, col. 22 lines 8 - 46).

35. Regarding claim 41, Cloonan in view of Siemens and Odfelt further show wherein at least one input signal comprises a first plurality of input signals timed synchronously with a timing reference signal of the node and a second plurality of input signal having a rate of receipt independent of said timing reference signal of the node (Fig. 17, col. 22 lines 8 - 46).

36. Regarding claim 42, Cloonan in view of Siemens and Odfelt further show receiving and transmitting signals comprising sets of signal components transmitted at intervals, wherein a set comprises a number of signal components partitioned from one another and wherein concatenated signal components in adjacent sets establish a number of logical links over a portion of a communications network (Odfelt, col. 5 lines 20 – 63, Cloonan, Fig. 17) wherein the

control means is connected to said output switch means and programmable to cause selected ones of the partitioned signal components of a set to be aggregated such that said aggregated signal components define an aggregated logical link having a

bandwidth corresponding to a predetermined multiple of the signal component bandwidth (Cloonan, col. 6 lines 28 - 67).

37. Regarding claims 48 and 49, Cloonan in view of Siemens and Odfelt further show a method of setting up a logical link or an aggregated logical link across a portion of a network comprising providing a plurality of communications nodes for establishing a plurality of logical links running through the node contemporaneously to one or more remote nodes, the communications node including input switch means; output switch means; a plurality of communications resources connected between said input and output switch means, said plurality of communications resources including at least first and second communications resources adapted to deliver different communication services including packet-switched services and circuit-switched services (Cloonan, col. 5 lines 9 - 23) said packet-switched services delivered by a plurality of packet processing pipelines (Cloonan, col. 6 lines 28 - 60) each of said packet processing pipelines processing packets according to one or more packet protocols (Siemens, pg. 7)

control means associated with said input switch means and said output switch means configured to establish logical links through the node (Cloonan, col. 6 lines 48 - 59) and across a plurality of nodes, and if configured to cause the set up of a logical by issuing a request to establish a logical link routed from a source to a destination node and to cause the setting of appropriate switching tables of nodes having the required resources but not of nodes denying the request (Cloonan, col. 6 lines 55 – 60 and col. 7 lines 22 -26, where said 'required resources' are represented by Cloonan's teaching of

utilizing only available, non-blocked paths), each said logical link comprising one or more channels of a physical link (Odfelt, col. 5 lines 20 - 30 and col. 13 lines 60 - 68) and wherein each said logical link is selectively switchable into circuit-switched services or switched services at each node (Cloonan col. 6 line 48 – col. 7 line 45)

routing a request to establish a logical link from a source node to a destination node over at least one of the plurality of communications nodes (Cloonan, col. 6 line 48 – col. 7 line 45).

38. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cloonan in view of Siemens and Odfelt as applied to claim 1 above, and further in view of Turner (4,494,230).

Regarding claim 39, Cloonan in view of Siemens and Odfelt show claims 1 and 2.

Cloonan in view of Siemens and Odfelt do not explicitly show wherein said output switch means is programming with switching information such that it receives packets from said input switch means which have bypassed said packet processing means and directs them without reference to destination information in the packet.

Turner shows wherein said output switch means is programming with switching information such that it receives packets from said input switch means which have bypassed said packet processing means and directs them without reference to destination information in the packet (cols. 3 and 4, col. 3 lines 33 – 38).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the disclosure of Cloonan in view of Siemens and Odfelt with that of Turner in order to improve packet switching speed (Turner, col. 2).

39. Claims 14, 18 and 43 - 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cloonan in view of Siemens and Odfelt as applied to claims 12 and 42 above, and further in view of Mark (US 2003/0128706 A1).

40. Regarding claim 14, Cloonan in view of Siemens and Odfelt show claim 12. Cloonan in view of Siemens and Odfelt do not explicitly show wherein one or more of said logical networks is initiated and/or terminated at an end terminal.

Mark shows wherein one or more of said logical networks is initiated and/or terminated at an end terminal (Abstract, Fig. 5, [14-16, 33-36]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of Cloonan in view of Siemens and Odfelt with that of Mark in order to improve the ability to control and provision network resources (Mark, [12]).

41. Regarding claim 18, Cloonan in view of Siemens, Odfelt and Mark further show wherein pluralities of said logical links are programmatically aggregated and disaggregated by said node (Mark, Abstract, Fig. 5, [14-16, 33-36]).

42. Regarding claim 43, Cloonan in view of Siemens, Odfelt and Mark further show control means connected to said input switch means and programmable to cause partitioned signal components which have been aggregated at a remote node to be disaggregated (Mark, [33-39]).

43. Regarding claim 44, Cloonan in view of Siemens, Odfelt and Mark further show a plurality of signal processing means connected between said input switch means and said output switch means, wherein said input switch means is configurable to supply at least a component of an input signal to a selected one of said signal processing means (Cloonan, Figs. 5 and 17, col. 6 lines 3 – 48).

44. Regarding claim 45, Cloonan in view of Siemens, Odfelt and Mark further show wherein one or more of said node processing means is arranged to process at least a signal component received on an aggregated logical link after signals transferred thereto have been disaggregated (Mark, [33-39, 44-46]; Odfelt, col. 5 lines 20 - 63).

45. Regarding claim 46, Cloonan in view of Siemens, Odfelt and Mark further show wherein one or more of said node processing means arranged to process at least a component of a signal received on an aggregated logical link without disaggregating the partitioned signal components defining the aggregated logical link (Mark, [33-39, 44-46]; Odfelt, col. 5 lines 20 - 63).

46. Regarding claim 47, Cloonan in view of Siemens, Odfelt and Mark further show wherein at least one signal processing means is arranged to support one or more of Ethernet, ATM, IP, IP over ATM, IP over Ethernet or unpacketised data (Cloonan, Abstract).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. MacIlwinen whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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